

Byrd Polar “Penguins”: A STEM Engagement Opportunity for Youth

Purpose

The Byrd Polar “Penguins” FIRST Lego League (FLL) team is a partnership between two BPRC researchers, Dr. Bryan Mark and graduate student Alfonso Fernandez, and families to provide a STEM enrichment opportunity outside the classroom.

FLL teams design, build and program autonomous Lego robots but also research, solve and present findings on solutions to real world problems.

The Penguins comprise a diverse team of 9-14 year-olds from Columbus, Dublin, and Hilliard Public schools. The 2012-13 team had 10 students, six born outside the United States and five spoke a second language. Yet all form a single team.

Impact

Penguin team members have connected with Bryan and Alfonso’s research during their 2013-14 project solution for the “Nature’s Fury” theme. They studied glacier lake outburst floods (GLOFs), and interviewed international scientists and engineers around the world via Skype. They connected with communities in Nepal and Peru where Bryan has conducted field work.

This second year, the team won the Strategy and Innovation award at the Newark local tournament December 7th and were then selected as Ambassadors at the Dublin Regional tournament January 11th. Ambassadors promote FIRST and engage more youth in FLL. This honor also gave the Penguins an invitation to compete in the Ohio State Championship tournament in Dayton on February 8th and 9th.



The Penguins have designed a specific outreach plan to invite more Columbus City School youth to participate in FLL. They have already visited Columbus City Schools (Cranbrook Elementary and Ridgeview Middle Schools) to present their research on GLOFs.

They have also partnered with a teacher, Mrs. Harris at Cranbrook Elementary School, who has received grant money to support expansion of the FLL program in the district. Next season, Mrs. Harris has welcomed the Penguins to mentor a new FLL team at Cranbrook.

Ohio State Colleges/Units Involved
Byrd Polar Research Center

Community Partners Involved
Columbus City Schools
Dublin City Schools
Hilliard City Schools



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